

IN THE CLAIMS

Please amend the claims as follows:

- A /
1. (currently amended) A transmitting device for transmitting a digital information signal via a transmission medium, including:
- input means for receiving the digital information signal,
 - adaptive prediction filter means adapted to derive a prediction signal from the digital information signal in dependence on an array of prediction filter coefficients,
 - first signal combination means for combining the digital information signal and said prediction signal so as to obtain a residual signal,
 - encoding means for encoding said residual signal so as to obtain an encoded signal,
 - coefficient generator means for generating an array of filter coefficients $A[i]$ in response to the digital information signal, i being an integer for which it holds that $0 \leq i < p$, where p is a variable,
 - output means for supplying the encoded signal to an output terminal for transmission via a transmission medium, and ~~characterized in that the device further comprises~~
 - smoothing means for smoothing the array of filter coefficients $A[i]$ so as to obtain the array of prediction filter coefficients for supply to the adaptive prediction filter means.

2. (currently amended) A The transmitting device ~~as claimed in~~ of claim 1, characterized in that the smoothing means ~~comprises~~ includes low-pass filtering means for low-pass filtering the array of filter coefficients so as to obtain the prediction filter coefficients ~~signal~~.

3. (currently amended) A The transmitting device ~~as claimed in of~~ claim 2, characterized in that the low-pass filtering means are in the form of a FIR filter.

4. (currently amended) A The transmitting device ~~as claimed in of~~ claim 2, characterized in that the low-pass filtering means are in the form of an IIR filter.

5. (currently amended) A The transmitting device ~~as claimed in of~~ claim 2, characterized in that the low pass filtering means is adapted to perform the following equations to obtain the coefficients:

$$C_{out}[0] = C_{in}[0],$$

$C_{out}[i] = 0.25 * C_{in}[i+1] + 0.5 * C_{in}[i] + 0.25 * C_{out}[i-1]$, whereby i is an integer and $1 \leq i \leq n-2$,

$$C_{out}[n-1] = C_{in}[n-1],$$

$C_{in}[x]$ being coefficient number x before smoothing, and $C_{out}[x]$ being coefficient number x after smoothing.

6. (currently amended) A The transmitting device ~~as claimed in of~~ any one of the preceding claims, (in the form of) an arrangement for writing the encoded signal on a record carrier.

7. (currently amended) A The method of transmitting a digital information signal via a transmission medium, comprising: the steps of

- receiving the digital information signal,
- deriving a prediction signal from the digital information signal in dependence on an array of prediction filter coefficients,
- combining the digital information signal and said prediction signal so as to obtain a residual signal,

- encoding said residual signal so as to obtain an encoded signal,
- generating an array of filter coefficients $A[i]$ in response to the digital information signal, i being an integer for which it holds that $0 \leq i < p$, where p is a variable,
- supplying the encoded signal to an output terminal for transmission via a transmission medium, and ~~characterized in that the method further comprises the step of~~
- smoothing the array of filter coefficients $A[i]$ so as to obtain the array of prediction filter coefficients.

8. (currently amended) A receiver for receiving a transmission signal and generating a digital information signal therefrom, the receiver comprising:

- receiving means for receiving the transmission signal and retrieving an encoded signal therefrom,
- decoding means for decoding the encoded signal so as to obtain a residual signal,
- adaptive prediction filter means adapted to derive a prediction signal from the digital information signal in dependence on an array of prediction filter coefficients,
- signal combination means for combining the residual signal and the prediction signal so as to obtain the digital information signal,
- coefficient generator means for generating an array of filter coefficients $A[i]$ in response to the digital information signal, i being an integer for which it holds that $0 \leq i < p$, where p is a variable, and ~~characterized in that the receiving device further comprises~~
- smoothing means for smoothing the array of filter coefficients $A[i]$ so as to obtain the array of prediction filter coefficients for supply to the adaptive prediction filter means.

9. (new) The method of claim 7 wherein:

the smoothing includes low-pass filtering the array of filter coefficients $A[i]$ so as to obtain the prediction filter coefficients;

the low-pass filtering is selected between one or more of: FIR filtering and IIR filtering;

the low pass filtering applies the following equations to obtain the prediction filter coefficients: $C_{out}[0] = C_{in}[0]$; $C_{out}[i] = 0.25 \cdot C_{in}[i+1] + 0.5 \cdot C_{in}[i] + 0.25 \cdot C_{out}[i-1]$, whereby i is an integer and $1 \leq i \leq n-2$; $C_{out}[n-1] = C_{in}[n-1]$, $C_{in}[x]$ being coefficient number x before smoothing, and $C_{out}[x]$ being coefficient number x after smoothing;

supplying the encoded signal includes writing the encoded signal on a record carrier.

10. ^{new} The receiver of claim 8, wherein:

the smoothing means includes low-pass filtering means for low-pass filtering the array of filter coefficients so as to obtain the prediction filter coefficients;

the low-pass filtering means are selected from one or more of: a FIR filter and an IIR filter;

the low pass filtering means is adapted to apply the following equations to obtain the prediction filter coefficients: $C_{out}[0] = C_{in}[0]$; $C_{out}[i] = 0.25 \cdot C_{in}[i+1] + 0.5 \cdot C_{in}[i] + 0.25 \cdot C_{out}[i-1]$, whereby i is an integer and $1 \leq i \leq n-2$; $C_{out}[n-1] = C_{in}[n-1]$, $C_{in}[x]$ being coefficient number x before smoothing, and $C_{out}[x]$ being coefficient number x after smoothing; and

the output means includes an arrangement for writing the encoded signal on a record carrier.

11. (new) A method for receiving a transmission signal and generating a digital information signal therefrom, the method comprising:

- receiving the transmission signal and retrieving an encoded signal therefrom,
- decoding the encoded signal so as to obtain a residual signal,
- deriving a prediction signal from the digital information signal in dependence on an array of prediction filter coefficients,
- combining the residual signal and the prediction signal so as to obtain the digital information signal,
- generating an array of filter coefficients $A[i]$ in response to the digital information signal, i being an integer for which it holds that $0 \leq i < p$, where p is a variable, and
- smoothing the array of filter coefficients $A[i]$ so as to obtain the array of prediction filter coefficients.

12. (new) The method of claim 11, wherein:

the smoothing includes low-pass filtering the array of filter coefficients $A[i]$ so as to obtain the prediction filter coefficients;

the low-pass filtering is selected between one or more of: FIR filtering and IIR filtering;

the low pass filtering applies the following equations to obtain the prediction filter coefficients: $Cout[0] = Cin[0]$;
 $Cout[i] = 0.25 * Cin[i+1] + 0.5 * Cin[i] + 0.25 * Cout[i-1]$, whereby i is an integer and $1 \leq i \leq n-2$; $Cout[n-1] = Cin[n-1]$, $Cin[x]$ being coefficient number x before smoothing., and $Cout[x]$ being coefficient number x after smoothing; and

supplying the encoded signal includes writing the encoded signal on a record carrier.
